

**Notice of Allowability**

Application No.

09/899,297

Examiner

Christopher R. Magee

Applicant(s)

YOSHIDA ET AL.

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed 7/12/2006.
2. ☒ The allowed claim(s) is/are 1-3,6-9 and 12-14 (renumbered as 1-10, respectively).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

*CR Magee* 7/21/06

*Angel Castro*  
**ANGEL CASTRO**  
**PRIMARY EXAMINER**

## DETAILED ACTION

### *Response to Amendment*

1. The reply filed 07/12/2006 was applied to the following effect: All relevant objections and rejections are withdrawn as being satisfied.

### *Reasons for Allowance*

2. Claims 1-3, 6-9 and 12-14 are allowed (renumbered as 1-10, respectively).

The following is an examiner's statement of reasons for allowance:

This application is for a THIN FILM MAGNETIC HEAD AND MANUFACTURING METHOD OF THIN FILM MAGNETIC HEAD.

- **Claim 1** specifies a thin-film magnetic head, which requires:

*“at least one thermal diffusion layer with a good thermal conductivity in contact with said coil insulation layer at an outside region of said upper core layer, wherein no protection layer is present on the thermal diffusion layer; and a thin coating film in contact with said at least one thermal diffusion layer, only said thin coating film being formed on said at least one thermal diffusion layer, said thin coating film being made of a material selected from Ti, Cr, Ta, Ni, Fe, Coe Au, Pt, Rh and Ru, or an alloy containing at least Ti, Cr, Ta, Ni, Fe or Co.”*

- **Claim 9** specifies a thin-film magnetic head, which requires:

*“at least one thermal diffusion layer with a good thermal conductivity formed at an outside region of said upper core layer, said at least one thermal diffusion layer being in contact with a part of said coil conductor or constituting a part of said coil conductor, wherein no protection layer is present on the thermal diffusion layer; and a thin coating film in contact with at least one thermal diffusion layer, only said thin coating film being formed on said at least one thermal diffusion layer, said thin coating film being made of a material selected from Ti, Cr, Ta, Ni, Fe, Coe Au, Pt, Rh and Ru, or an alloy containing at least Ti, Cr, Ta, Ni, Fe or Co.”*

Koshikawa (JP 03-162705) discloses at least one thermal diffusion layer [21] with a good thermal conductivity formed on said coil insulation layer [14] at an outside region of said upper core layer, said at least one thermal diffusion layer being in contact with a part of said coil conductor or constituting a part of said coil conductor [Fig. 1]. Koshikawa does not teach or suggest the coating film is made of a material selected from Ti, Cr, Ta, Ni, Fe, Co, Au, Pt, Rh and Ru, or an alloy containing at least Ti, Cr, Ta, Ni, Fe or Co.

Iizuka (JP 2000-057534) discloses using a thin coating film [i.e., upper shielding 14] formed on said thermal diffusion layer [i.e., heat dispersion layer 16] made of a material selected from Ti, Cr, Ta, Ni, Fe, Co, Au, Pt, Rh and Ru, or an alloy containing at least Ti, Cr, Ta, Ni, Fe or Co. [section 0030; Figure 2]. Figures 1 and 2 of Iizuka show a first protection layer 15 is present between the upper shielding 14 and the heat dispersion layer 16.

Neither Koshikawa nor Iizuka fail to teach, suggest or disclose a thin coating film in contact with least one thermal diffusion layer, as recited in each of claims 1 and 9.

Therefore, these features, in combination with other features of claims 1 and 9, are not anticipated by, nor made obvious over, the closest prior arts of record of Koshikawa (JP 03-162705), Williams et al. (US 5,949,927) and/or Gill (US 6,381,094 B1).

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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***Conclusion***


4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R. Magee whose telephone number is (571) 272-7592. The examiner can normally be reached on M-F, 8: 00 am-4: 30 pm.

5. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**ANGEL CASTRO  
PRIMARY EXAMINER**



**Christopher R. Magee  
Patent Examiner  
Art Unit 2627**

July 20, 2006  
crm